ABSTRACT

Background: *The number of low birth weight baby cases is still high because of less maternal BMI status before pregnancy and increase of mother's body mass which not convenient with pregnancy age. Meanwhile, there is other study showed that BMI status is not affecting fetal growth, but height of pregnant woman did. Fetal growth can be describe with fetal weight estimation. Improving nutrition of pregnant women, may have good nutrition, so as fetal weight may goes well. The problem of this study is based on Riskesdas 2013 showed that the number of low birth weight baby cases about 10,2%, this cases have decrease compared to Riskesdas 2010 about 11,1%. In despite of the decrease, the number is still high. The aim of this study is to discover relation of BMI before pregnancy and increase of body mass during third trimester of pregnancy with fetal body weight estimation in Puskesmas Tanggulangin.* ***Method****: This research uses observational analytic with cross sectional research design with total sampling technique in sampling. About 349 data pregnant woman in third trimester in Puskesmas Tanggulangin at March 2016-April 2017 fulfilled criteria of this research studied with Spearman correlation between BMI before pregnant and weight gain in third trimester to fetal weight estimation, found that p value 0,01 BMI before pregnant and fetal weght estimation, and p value 0,100 for weight gain in third trimester and fetal weight estimation.* ***Conclusion:*** *Pre-pregnancy body mass index is relation with fetal weight estimation, but not for weight gain in third trimester at Puskesmas Tanggulangin.*

Keywords: body mass index, weight gain in third trimester, fetal weight estimation